Amendments to the Claims

Please amend the claims as indicated.

1. (Currently amended) A computer program product comprising a computer useable medium having a computer readable program, wherein the computer readable program when executed on a computer causes the computer to:

add snapshot criteria to a snapshot set stored in a metadata buffer, the snapshot criteria comprising a source volume indicator, a target volume indicator, an auto-select target indicator, a redundancy level indicator, a partial volume indicator, a background copy indicator, and a source extents indicator, the redundancy level indicator configured to select a redundancy in the range of no redundancy to a RAID level 50 redundancy and the background copy indicator configured to indicate whether data transfers for a plurality of fast replications operations are conducted as a background operation, wherein the metadata buffer stores metadata for storage-based operations; and

execute [[a]]the plurality of fast replications operations comprising creating a snapshot set defined by metadata in the metadata buffer and deleting a specified snapshot set as specified by the snapshot set.

2. (Canceled)

3. (Canceled)

4. (Previously presented) The computer program product of claim 1, wherein the computer readable program is further configured to cause the computer to:

delete specified snapshot criteria from the snapshot set; and

terminate the plurality of fast replications operations specified by the snapshot set.

5. (Previously presented) The computer program product of claim 1, wherein the computer readable program is further configured to cause the computer to provide information regarding a specified snapshot set.

6. (Currently amended) An apparatus for managing and conducting fast replication operations, the apparatus comprising:

a snapshot management module configured to add snapshot criteria to a snapshot set stored in a metadata buffer, the snapshot criteria comprising a source volume indicator, a target volume indicator, an auto-select target indicator, a redundancy level indicator, a partial volume indicator, a source extents indicator, and a background copy indicator, the redundancy level indicator configured to select a redundancy in the range of no redundancy to a RAID level 50 redundancy and the background copy indicator configured to indicate whether data transfers for a plurality of fast replications operations are conducted as a background operation, wherein the metadata buffer stores metadata for storage-based operations; and

a snapshot execution module configured to execute [[a]]the plurality of fast replications operations comprising creating a snapshot set defined by metadata in the metadata buffer and deleting a specified snapshot set as specified by the snapshot set.

7. (Canceled)

8. (Original) The apparatus of claim 6, wherein the snapshot execution module is further configured to terminate the plurality of fast replications operations specified by the snapshot set.

9. (Original) The apparatus of claim 6, wherein the snapshot management module is further configured to manage a list of controllers associated with the snapshot set.

10. (Canceled)

11. (Original) The apparatus of claim 6, wherein the snapshot management module is further configured to delete specified snapshot criteria from the snapshot set and the snapshot execution module is further configured to terminate the plurality of fast replications operations specified by the snapshot set.

12. (Original) The apparatus of claim 6, wherein the snapshot management module is further configured to provide information regarding a specified snapshot set.

13. (Currently amended) An apparatus for managing and conducting fast replication operations, the apparatus comprising:

means for adding snapshot criteria to a snapshot set stored in a metadata buffer, the snapshot criteria comprising a source volume indicator, a target volume indicator, an auto-select target indicator, a redundancy level indicator, a partial volume indicator, a source extents indicator, a redundancy level indicator, and a background copy indicator, the redundancy level indicator configured to select a redundancy in the range of no redundancy to a RAID level 50 redundancy and the background copy indicator configured to indicate whether data transfers for a plurality of fast replications operations are conducted as a background operation, wherein the metadata buffer stores metadata for storage-based operations; and

means for executing [[a]]the plurality of fast replications operations comprising creating a

snapshot set defined by metadata in the metadata buffer and deleting a specified snapshot set as specified by the snapshot set.

14. (Original) The apparatus of claim 13, further comprising:

means for managing a list of controllers associated with the snapshot set;

means for creating the snapshot set;

means for deleting a specified snapshot set;

means for removing specified snapshot criteria from the snapshot set;

means for terminating the plurality of fast replications operations specified by the snapshot set; and

means for providing information regarding a specified snapshot set.

15. (Canceled)

16. (Currently amended) A method for managing and conducting fast replication operations, the method comprising:

adding snapshot criteria to a snapshot set stored in a metadata buffer, the snapshot criteria comprising a source volume indicator, a target volume indicator, an auto-select target indicator, a partial volume indicator, a source extents indicator, a redundancy level indicator, and a background copy indicator, the redundancy level indicator configured to select a redundancy in the range of no redundancy to a RAID level 50 redundancy and the background copy indicator configured to indicate whether data transfers for a plurality of fast replications operations are conducted as a background operation, wherein the metadata buffer stores metadata for storage-based operations; and

executing [[a]]the plurality of fast replication operations comprising creating a snapshot

set defined by metadata in the metadata buffer and deleting a specified snapshot set as specified by the snapshot set.

17. (Canceled)

18. (Previously presented) The method of claim 16, further comprising conducting an operation selected from the group consisting of:
providing information regarding a specified snapshot set;
deleting specified snapshot criteria from the snapshot set; and
terminating the plurality of fast replications operations specified by the snapshot set.

19. (Original) The method of claim 18, wherein adding snapshot criteria to a snapshot set is conducted using an API.

20. (Original) The method of claim 16, wherein adding snapshot criteria to a snapshot set and initiating a plurality of fast replication operations as specified by the snapshot set are conducted across multiple volumes and multiple controllers.

21. (Original) The method of claim 16, wherein initiating a plurality of fast replication operations may be conducted by any one of a plurality of servers in a storage system.

22. (Original) The method of claim 16, further comprising managing a list of controllers associated with the snapshot set.

23. (Currently amended) A system for managing and conducting fast replication operations, the system comprising:

a plurality of storage volumes configured to store data;

at least one storage controller configured to manage the storage volumes; ~~and~~

the at least one storage controller further configured to add snapshot criteria to a snapshot set stored in a metadata buffer and execute a plurality of fast replications operations as specified by the snapshot set, the snapshot criteria comprising a source volume indicator, a target volume indicator, an auto-select target indicator, a partial volume indicator, a source extents indicator, a redundancy level indicator, and a background copy indicator, the redundancy level indicator configured to select a redundancy in the range of no redundancy to a RAID level 50 redundancy and the background copy indicator configured to indicate whether data transfers for a plurality of fast replications operations are conducted as a background operation, wherein the metadata buffer stores metadata for storage-based operations; and

the at least one storage controller further configured to execute [[a]]the plurality of fast replications operations comprising creating a snapshot set defined by metadata in the metadata buffer and deleting a specified snapshot set as specified by the snapshot set.

24. (Canceled)

25. (Original) The system of claim 23, wherein the at least one storage controller is further configured to:

manage a list of controllers associated with the snapshot set;

remove specified snapshot criteria from the snapshot set;

terminate the plurality of fast replications operations specified by the snapshot set; and

provide information regarding a specified snapshot set.

26. (Currently amended) A computer program product comprising a computer useable medium, wherein the computer readable medium when executed on a computer causes the computer to:

add snapshot criteria to a snapshot set stored in a metadata buffer, the snapshot criteria comprising a source volume indicator, a target volume indicator, an auto-select target indicator, a partial volume indicator, a source extents indicator, a redundancy level indicator, and a background copy indicator, the redundancy level indicator configured to select a redundancy in the range of no redundancy to a RAID level 50 redundancy and the background copy indicator configured to indicate whether data transfers for a plurality of fast replications operations are conducted as a background operation, wherein the metadata buffer stores metadata for storage-based operations; and

execute [[a]]the plurality of fast replications operations comprising creating a snapshot set defined by metadata in the metadata buffer and deleting a specified snapshot set as specified by the snapshot set.

27. (Canceled)

28. (Previously presented) The computer program product of claim 26, wherein the computer readable program is further configured to cause the computer to:

manage a list of controllers associated with the snapshot set;

remove specified snapshot criteria from the snapshot set;

terminate the plurality of fast replications operations specified by the snapshot set; and

provide information regarding a specified snapshot set.